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ABSTRACT

Physical education curriculum is examined from both the subject-centered and student-centered theories of curriculum design. A subject-centered curriculum is described as a discipline studying human movement from several perspectives: biomechanical, physiological, psychological, sociological, historical, philosophical, and aesthetic. Proponents of this theory believe that the structure of the physical education program should parallel the perceived structure of the discipline. In contrast, student-centered curriculum begins with the assumption that the physical education program content should be selected, structured, and sequenced according to the needs of the students. The problems of evolving a physical education program successfully meshing both of these theories are discussed in this address. (JD)

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THE STATE OF PHYSICAL EDUCATION CURRICULUM

Linda L. Bain

A paper presented at the Curriculum Symposium sponsored by the National Association for Sport and Physical Education, St. Louis, Missouri, November 4, 1978.

Tonight I have been asked to speak about the state of physical education curriculum. The most obvious analogy would be the President's annual state of the union address. But somehow that metaphor didn't seem to fit. No one played Hail to the Chief when I entered. And as a group we lack the power to legislate curricular reform. I think a more appropriate analogy might be that of a revival meeting—a gathering of the true believers to reaffirm our faith, to confess our sins, and to renew our commitment to the saving of lost souls. As the great-granddaughter of a fire and brimstone preacher, I will try to rise to the occasion.

I would like to begin by examining the gospel, the theoretical prescriptions of what physical education programs should be like. But first we must ask "The gospel according to whom?" The state of physical education curriculum theory is that there is no single, universally-accepted theoretical position from which programs are derived (Bain 1978b). There are many theories, many gospels, each with its own set of disciples. Most of these theories have not been clearly articulated but have been disseminated in bits and pieces as part of our folklore. However, each potentially can serve as a basis for the selection, structuring and sequencing of content in a physical education program.

Attempts to systematically describe education have generally proceeded from one of two basic orientations: subject-centered or learner-centered. Subject-centered approaches have examined the nature of the phenomenon to be studied and have derived the curricular structure from the structure inherent in the subject-matter itself. But not everyone agrees on what structure is inherent in the subject-matter of physical education. There are two basic physical education theories which

SP013 294

can be classified as subject-centered: an activities theory and a concepts theory. Each uses a different set of structural principles to describe the true nature of physical education.

Activities theorists describe the content of physical education as physical, ludic or play activities. The structure of physical education is seen as divided into sport, dance, and exercise with further subdivisions into specific activities. Because it is not practical to include all sport, dance and exercise activities in a physical education program, selections must be made. Usually the principle of balance is employed and a certain percentage recommended for each of the three major categories. Specific activities are then selected on the basis of local cultural importance and practical factors such as facilities, equipment and teacher expertise. The structure of the program parallels exactly the perceived structure of the subject-matter. The curriculum at all age levels is organized into activity units: folk dance, soccer, golf, etc. Vanderzwaag proposes that "most of the basic skills in the various sports can and should be taught in grades K through 3." (1972:242) The sequencing of the curriculum does provide for two kinds of progression: (1) from introductory instruction in a variety of activities to specialization in a few, and (2) from informal play to structured competition and performance. This theoretical prescription for physical education programs can readily accommodate athletics as the pinnacle of advanced physical education.

Although the organization of physical education programs into activity units is not new, the development of a theoretical position which describes the activities as the focus of the program is new. Siedentop (1976) and Vanderzwaag (1972) and others have articulated a philosophy which proposes that the purpose of the physical education program is to enable students to participate in sport and dance activities which are intrinsically meaningful. This is an important distinction; the activities theory describes meaningful participation in the activities as the goal not as a means to some other goal such as fitness, character development, etc.

Few existing programs have endorsed this theoretical position. In addition, few current programs effectively implement the recommended progressions. Many activity-centered programs never proceed beyond introductory instruction or informal play in a variety of activities. It might therefore be concluded that despite the original impression that many activities programs exist, the activites or movement forms curricular theory has not been fully implemented in many programs.

How do we examine the validity of this theory? Certainly your judgment will depend partially on your own philosophic position. But each of the theories we will discuss makes certain assumptions and one way to examine the validity of the theory is to examine the assumptions. One of the assumptions of the activities theory is that students of all ages are capable of learning specific sport and dance skills. A second assumption is that students, including young children, find instruction in specific activities more meaningful and therefore, more motivating than instruction in basic skills. Each of these assumptions could be empirically tested, but thus far little evidence is available.

The other major subject-centered approach is the concepts theory. There are two versions of the concepts approach—the disciplinary study model which has been applied sparingly in secondary schools and the movement education model applied primarily in elementary schools. In the concepts theory, physical education is perceived as a discipline studying human movement from several scholarly perspectives: biomechanical, physiological, psychological, sociological, historical, philosophical, and aesthetic. Proponents of this curriculum theory believe that the structure of the physical education program should parallel the perceived structure of the discipline. Instructional units would be developed in areas such as mechanics of movement or physiology of exercise or in subtopics such as balance principles, cardiorespiratory efficiency, or social influences on activity preferences. Students often are involved in the process of scholarly inquiry in a "movement laboratory" (Corbin et al, 1970)

Elementary school movement education programs have also focused upon concepts, but primarily concepts relating to the analysis of movement derived from the work of Laban (1963). The basic concepts studied are body awareness, space awareness, effort, and relationships (Stanley, 1969). Again the structure of the curriculum parallels the perceived structure of the subject-matter. Content is selected to represent all of the basic concepts. Within a particular unit a variety of activities is used to illustrate the concept. Terminology and cognitive understanding of the concepts are emphasized in addition to motor performance. Because the concepts are viewed as generalizations applicable in a number of situations, movement education programs have often emphasized exploration of the range of possible skills illustrating each concept. As a result, there has been an emphasis upon problem-solving or discovery teaching methods.

The progression in a concepts curriculum is based on the concepts not the skills. The program moves from narrow to broad perspectives and from simple to complex concepts. The student is simultaneously learning about movement and learning to move.

Concepts theories also make some assumptions which need to be identified and examined. One assumption is that the structure used by scholars in discovering knowledge is a meaningful structure for disseminating knowledge to students. That is, students can more effectively learn about force production principles in a unit on that topic than by having force production principles integrated into units on softball, volleyball, tennis, etc. A second assumption appears to be that learning basic concepts will enhance the future learning of new skills. Motor learning research regarding specificity of skills has been cited to refute this claim (Siedentop, 1976), but issues regarding transfer of learning have not been completely resolved.

Both the activities theory and the concepts theory are subject-centered cur-

ricular theories. Both see the subject-matter as intrinsically valuable not as an instrument to some other goal. Both focus on learning to move not learning through movement. These theories can be contrasted with the student-centered theories. Student-centered theories begin with the assumption that physical education program content should be selected, structured and sequenced according to the needs of students. Content is perceived as having instrumental rather than intrinsic value; that is, physical education experiences are valuable because they contribute to the development or improvement of the student. There are two influential student-centered curricular theories in physical education: The developmental theory and the student purposes theory. They differ primarily in the manner in which student needs are identified.

In the developmental theory, knowledge about human development is used to identify the needs of students at different levels. Am important implication of developmental theory as a basis for physical education programs is that the scope and the structure of the program differ at various age levels. Elementary school physical education focuses upon fundamental skills; units might include locomotion, non-locomotion, manipulation, rhythm, balancing, etc. Perceptual-motor development theory would add units on such topics as body awareness, laterality, and directionality. Secondary programs emphasize the more specialized skills used in sport or dance activities.

The developmental theoretical viewpoint is perhaps the most widely accepted and implemented in physical education programs. An eclectic tendency is evident in that movement analysis concepts are often absorbed in the primary grade program and activity organization is endorsed in secondary programs. However, the justification for the program is not based upon the structure inherent in the subject matter but upon the natural developmental stages of the student.

What assumptions are inherent in the developmental theory? There seems to be

an assumption that all human beings go through a common developmental sequence and have similar needs at various stages of development. Unless the program is individualized, there may also be an assumption of a similar rate of development. Another assumption seems to be that planned physical education experiences can enhance development—either the rate of development or the quality of development. A complete review of the literature is beyond the scope of this paper, but little evidence has been found to support traditional claims of the contributions of physical education to social, personal and cognitive development. However, motor development research may be able to provide information on which to base our judgments regarding the influence of physical education experiences on the development of motor skills.

A second approach to using student needs as a basis for curriculum design is to identify the student's own motives for participating in activity. The program would then be planned so as to provide experiences which satisfy the student's own purposes. Primary examples of this theoretical approach in physical education are the work of Kenyon (1968), Jewett and Mullan, (1977) and Hellison (1978). Each of them has approached the task from a different perspective and with different procedures, but each has been interested in identifying student purposes for participation.

Kenyon used factor analysis procedures to identify six types of instrumental value perceived by participants in physical activities: social, health and fitness, vertigo, aesthetic, catharsis, and ascetic. The Purpose Process Curriculum Framework developed by Jewett assumes that human beings share a common set of twenty-two purposes for movement participation which fit into the broad categories of: physiological efficiency, psychic equilibrium, spatial orientation, object manipulation, communication, group interaction, and cultural involvement. The purposes were originally identified by physical educators, but Chapman's (1974) investigation

found that students perceived of these goals as being useful and likable in varying degrees.

A curriculum based on either of these schemes would include units related to each of the purposes. These units might be activity units or concept units depending on the specific purpose (Appendix A). Because each of the motives has varying importance for different individuals, students would be allowed to select the units in which they participated. Value clarification would be encouraged as the basis for individual selection of activities appropriate to the student's motives and interests. "Humanistic" physical education programs such as described by Hellison (1978) have emphasized self-awareness and individual choice and are highly compatible with a program design based on student purposes. I have chosen to use the label student purpose curriculum rather than humanistic curriculum because of the confusion about the term humanistic. Because all of us, regardless of philosophy, would like to be considered humane, the term humanistic has been appropriated by a wide range of people and no longer clearly communicates its original meaning.

The influence of student purposes as a basis for curriculum design appears to be growing. Selective programs in which students choose the activities they will take are occurring in secondary schools with increasing frequency. However, these programs rarely attempt to help students to identify their personal goals and to use these goals as a basis for selecting activities.

The curriculum based on student purposes also seems to make some assumptions. First, it seems to assume that all students have some purpose or motive for participating in physical activity—that is, given a range of appropriate choices, all students would choose to participate in something. Secondly, it assumes that students are capable of assessing their purposes and making reasonable choices based on this assessment. Again we lack evidence to evaluate these assumptions. But

one's acceptance of them seems to be the key factor in endorsing a purposes curriculum. Persons who believe that programs should be based on student needs but that that decisions about goals should be made by teachers not students seem to be endorsing a developmental curriculum theory not a student purposes curriculum theory. The Jewett framework despite its title as a purpose framework has been interpreted in both contexts.

This then is the gospel in four chapters. One can begin with the subject-matter and choose between activities and concepts. One can begin with the student and choose between developmental needs and student purposes. These are the major theoretical prescriptions about how programs ought to be. But do they describe the way programs really are? What is the state of physical education curriculum reality?

How do we know the way programs really are? Primarily we tend to rely on personal experience, on what we have seen and done and read. On the basis of my personal experience, I have concluded that few programs fit any of the four theoretical models I have just described. But we need not rely on our own personal, somewhat limited and perhaps biased observation. This question is an empirical question. It is a question that could be answered by careful, controlled observation and measurement. What are current physical education programs like?

To research that one would have to begin by asking some questions. And the kind of questions we ask could strongly influence the kind of answers we would get. I would like to raise some questions we might ask in examining the reality of our physical education programs. I will not attempt to answer these questions. First, the amount of research evidence currently available is not sufficient to provide a basis for comprehensive and conclusive statements about reality. Second, in a country as large and varied as ours, it would be presumptuous to assume that there is one picture of reality that fits all regions and situations. What I will attempt

to do is to clarify some strategies you might use to examine more carefully your own reality.

Research is an intimidating word that may seem somewhat foreign at a curriculum symposium. But research is simply the careful and systematic collection and interpretation of information. Curriculum research is perhaps the most logical joint project of public school teachers and curriculum scholars. Public school teachers have access to the programs and the students being studied. University faculty have the skills and knowledge to design studies, develop instruments, and analyze data. Research will not solve all of our problems. But it could provide more information on which to base reasoned judgments.

Huebner (1966) has suggested that most questions we ask about education are technical questions about efficiency but that we might also ask political, moral and aesthetic questions. The basic technical question is, "How efficiently are we achieving our goals?" This question can be applied to any program regardless of what its goals are. Our first problem in answering this question is do we know what our goals are? Our real goals may or may not be the objectives neatly written in the curriculum guide for public consumption. Once the goals are identified, three types of data collection and analysis are appropriate. The most basic is to measure student performance and to compare the results with other programs, national norms, or predetermined local expectations. Collection of student performance data in physical education appears to be astonishingly infrequent. Surveys (Bain, 1974; Critchley, 1970) have indicated that physical educators rarely measure skill or knowledge as a basis for evaluation in physical education. Measurement of fitness may be somewhat more frequent but seldom do we have student performance data on which to base the evaluation of our program's efficiency in attaining its goals.

If student performance data are available, two additional research questions can be addressed: teacher effectiveness and cost-effectiveness. Teacher effective-

ness research has tried to identify teacher behaviors which are related to student performance gains. Cost-effectiveness research has examined the ratio of monies expended to student performance gains to see which programs seem to be the better bargain. This type of research may become more frequent in the era of taxpayer's revolts.

Effectiveness research in public schools is difficult to do. Many factors besides the quality of the program can influence student performance and contaminate the results. But effectiveness questions cannot be ignored if we define our programs as educational.

Another way to examine the reality of our programs is to ask political questions: Who has decision-making power? Who has access to program resources? The political perspective asks not what were the decisions made but who made them. What factors determine who has the power? How stable is the power structure? What strategies are most effective in producing change? Although scholars in other fields have studied the processes of change, little research has been done describing the politics of program development in physical education.

The political questions can also be approached by examining the allocation of resources to various groups or for various aspects of the program. Title IX has produced a number of studies comparing monies expended for men's and women's athletics. Other comparisons might also reflect the political power structure: money for secondary physical education versus money for elementary physical education, office space for male and female teachers, time use of weight training facilities by male and female athletes and non-athletes. The allocation of limited resources is an important indication of political power.

The moral examination of our programs is more difficult to approach empirically. The basic moral question is, "To what extent do our programs reflect basic values of justice, equality and human dignity? Although interpretation of these values can be complex, research describing teacher behavior can be examined

for clues in answering this question. Differential treatment of boys and girls or of minority students might reflect teacher sexism or racism. Excessive use of humiliation or punishment might indicate lack of respect for individual students. Jackson (1968) and others have described the manner in which the experience of schooling provides a powerful expression of the implicit values of educators. The author's research (Bain 1975, 1976, 1978A) has focused on examining this "hidden curriculum" of values implicit in the process of schooling. The values implied by our behavior may or may not be consistent with our expressed philosophy. Examination of these implicit values seems imperative.

The aesthetic evaluation of a program focuses on the quality of the experience provided participants. The basic question is, "To what extent is 'living in' our programs a pleasurable experience?" This can be answered on two levels: by asking the students if they like it and by examining the day to day experience almost the way a drama critic would examine a play. Physical educators have done a sizable amount of research on student satisfaction with our programs. We are reluctant to admit it to other educators for fear that they will not take us seriously, but we have a firm commitment that the program should be fun. Despite serious instrumentation problems, physical educators have attempted to measure student attitudes and satisfaciton.

The art critic's approach to describing aesthetic qualities of a program is much more unusual. (Mann, 1969; Vallance, 1975) The critic uses techniques such as similes, selective emphasis, and picturesque language to describe the experience so that the reader can comprehend what it would feel like to live through it. Art criticism is empirical only to the extent that others who have lived through similar experiences perceive it to be valid (Vallance, 1975). The best example I could find relating to physical education was an article on jogging which appeared in a Houston newspaper (Goodman, 1978). Let me read some of it to you and see if you share my estimate of its validity.

> For weeks she had run along her city streets, "hitting the wall" at a mile and a half, fighting a stomach cramp here, tugging at her shrunken shorts there.
>
> She had dutifully trudged along, expecting at any moment to experience the "high," the sense of well-being, or at least one moment when she would think of something other than stopping. The jogging books had all told her that there was pleasure in this process. . .
>
> But now, here she was on this perfect dirt road, under this perfect sky, on this perfect 75-degree day, struck with a perfectly obvious fact: She was miserable. . .
>
> At least as she counted her breathing like a Lamaze patient, she was not alone. In a country criticized for self-indulgence, it seemed that half the people were committed to this sort of miserable self-discipline. . .
>
> People all around her counted their calories and their mileage with the obsession of sinners. They did penance for too many of one with more of the other. . .
>
> Running was a hateful thing to do. But it was a great thing to have done. As she sprinted the last 1/10th-mile she remembered the best part: finishing.

It might be both interesting and revealing to have students or a local journalist or a drama critic write a piece on what it is like to be in your physical education class.

What is the reality of existing physical education programs? We cannot answer that question completely this evening. The time is too short and the evidence too sparse. We can speculate. We can speculate that many existing programs are relatively ineffective in attaining their objectives. We can speculate that some programs are somewhat unfair and may or may not be enjoyable. We can also speculate that political forces exist which make change difficult.

But why? Why do these differences between theory and reality exist? Why are we in a "state of sin"? How do we save ourselves? We will consider four possibilities.

1. Confusion: Perhaps we are in a state of sin because there are too many gospels, too many theories, and it confuses us. We are uncertain which theory,

if any, is valid.

If this is the problem, what are the solutions? One solution that is sometimes proposed is a national curriculum. AAHPER or NASPE or somebody ought to tell us what is the best program. I am not convinced that this is either possible or desirable. The other solution to this problem is to prepare teachers to handle diversity and complexity. Melagrano (1978) referred to this as preparing teacher designers not teacher consumers.

2. Ignorance: A second possible explanation of the problem could be that teachers have selected the theory they believe in but don't have the skills and knowledges to implement it. A teacher may genuinely endorse a concepts curriculum but lack specific knowledge about exercise physiology or sociology of sport or lack the ability to make such information interesting and relevant to students. A teacher may endorse an activities program but lack high level expertise in specific sport and dance activities. A teacher may endorse a developmental program but lack the skills to assess the developmental needs of specific students and the instructional skills to provide appropriate learning activities for individuals at different developmental levels. A teacher may endorse a student purposes curriculum but lack the ability to provide value clarification experiences and to counsel individual students in making choices.

If teachers lack the expertise to implement the program of their choice, this may indicate the need for improved professional preparation or inservice programs. The development of prototype programs which could be used as models for others to emulate might also be useful.

3. Bondage: The possibility also exists that physical education programs differ from what we believe they should be because we are not free to change them, because the situational constraints of public school make it impossible to conduct a good program. Large class sizes, lack of facilities and equipment, and lack of administrative support are factors which may prevent teachers from improving

their programs.

If this is true, then what are the solutions? One possibility is to prepare teachers to teach in these less than desirable circumstances. Pleas to make professional preparation more realistic are often pleas to provide prospective teachers with experiences teaching large groups in small spaces with no equipment! Presumably such experiences will teach teachers how to cope (or discourage them from wanting to teach). The other potential solution is to attempt to change the system, to fight for better facilities, smaller classes and more administrative support. But we may be fighting from a weak position with few political skills.

4. False idols: The final explanation which we will consider for the discrepancy between theory and practice is that physical education programs are weak because physical educators value athletics more than they value physical education. Many physical educators fill two roles: teacher and coach. Locke and Massengale (1978) have described the perceived conflict between these two roles. One way to deal with role conflict is to place a higher priority on one of the roles. The prestige and satisfactions associated with the role of coach may result in priority being given to coaching over teaching.

Solutions to this problem are difficult. One can seek to convert the coaches to care about physical education or one can attempt to "excommunicate" the coaches from physical education by separating physical education and athletics. Converting the coaches may be difficult. Many people were originally attracted to physical education because of personal experience in athletics and are rewarded more for coaching performance than for teaching performance. Changing staffing patterns to hire different persons for the teaching and coaching roles could be financially difficult if coaches were reimbursed realistically for time spent coaching.

Most of us acknowledge the existence of a problem. The state of physical education curriculum is one of theoretical diversity and of a wide discrepancy between theory and practice. The solutions to the problem depend upon our analysis of the

causes. So where do we go now; what is our plan of action?

There are two kinds of persons in this room and we may have different repsonsibilities in responding to this problem. Some of us would describe ourselves as curriculum scholars, college and university people whose interest is program design and instructional behavior. To the scholars I say that it is time to describe as well as prescribe. It is time to begin to do research on two things: existing programs and theoretical models.

For existing programs, we can study effectiveness, political power structures, and moral and aesthetic qualities of the program. For theoretical models, we can examine the validity of the assumptions, identify the teacher skills it requires, and develop and test the effectiveness of prototypes. We need information to make judgments. And it is the scholars' job to provide information as well as theories.

Others of you are public school teachers, persons involved in the development and implementation of programs. I wish to suggest that you look at your programs from a new perspective, the political/sociological perspective. We have tended to examine most curriculum and instruction issues from the point of view of the individual teacher. When problems occur, we try to solve them by improving the individual teacher through professional preparation or inservice training. I suggest that it is the system not the individuals that needs changing. Regardless of their individual talents and beliefs, many teachers appear to be swallowed up by the system. The politics of social change may be the most critical kind of knowledge for us to have and we have neither studied it nor taught it nor used it. I suggest it is time to begin.

Appendix A

STUDENT PURPOSES CURRICULUM

Orientation: Value Clarification
Physical Self-Assessment

PURPOSES	CONCEPTS	ACTIVITIES		
Social	Sport in society Group dynamics in sport	Tennis Swimming Volleyball Bowling	Social dance Badminton Softball Folk dance	Golf Frisbee Flag football
Fitness	Principles of conditioning Weight control	Jogging Swimming Handball	Soccer Basketball Cycling	Aerobic dance Weight training
Aesthetic	Principles of choreography Sport art	Ballet Modern dance Gymnastics	Figure skating Diving Synchronized swimming	
Vertigo	Personality and risk-taking Accident prevention	Skiing Diving Gymnastics	Skate boarding Scuba diving	
Catharsis	Aggression in sport Coping with stress	Wrestling Self-defense Karate	Yoga Relaxation	
Ascetic	Behavior modification and self-discipline	Swimming Jogging Cycling	Weight training Weight lifting Ballet	

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